

## **Remarks Supporting Amendment**

The above amendments are believed to comply with the requirements for amendments of Claims, and do not introduce any new matter or disclosure. Specific locations of support for each Claim amendment are as follows:

1. Claim 2: Support is found in Figure 6 of the drawings and at paragraph 4, lines 19-21 of the Specification as filed: “This configuration typically includes a lip about the inner diameter of the gland that upon securement extends axially within the bell.” The replacement of the word “first” for the word “male” in part (b) of the claim is for antecedent basis only.
2. Claim 3: Support is found in Claim 3 as originally filed, and at paragraph 13, lines 8-13 of the Specification, as filed: “Due to contact with bell 12 in addition to gland 11, separative forces are transferred by segment 1, not just against gland 11 but also against bell 12. This is significant in that it **reduces** a potentially substantial force that is resisted by bolts 45...the current invention’s ability to transfer **a portion** of the magnitude of the separative vector to the Bell therefore enhances the effectiveness of sealing.” The replacement of the word “second” for the word “male” in part (b) of the claim is for antecedent basis only.
3. Claim 13: Support is found in the following locations: (a) paragraph 7, lines 3-6; (b) page 16, line 30 – page 17, line 2; (c) page 7, lines 20-28 ; and (d) page 9, lines 21-23. The addition of the term “recess” to the term “seat-meeting area” is added for antecedent basis reasons only. The Applicant thanks the Examiner for raising this issue to the attention of the Applicant.
4. Claim 14: Claim 14 is amended to correct dependency and the antecedent basis issue identified by the Examiner, and is not believed to require additional support. Applicant appreciates the Examiner raising the antecedent basis issue to Applicant’s attention.
5. Claim 16: Support is the same as for amendments to Claims 2 and 3, as set forth above.

## **Responses to Examiner's Remarks in Detailed Action**

Reconsideration of the application is respectfully requested. The Application stands rejected as to all claims, 1 through 16, on the basis of 35 U.S.C. 102(b) over Percebois et al, U.S. Patent No. 5,297,826 ("Percebois"). Based on the following analysis and in light of the above amendments, Applicant respectfully requests that the Examiner withdraw the rejections.

### **Claim Objections**

#### **Examiner's Page 2, Paragraph 1**

The Examiner objected to Claim 14 because of the informality of the errant use of the phrase "gland-meeting area" where the phrase "gland-facing surface" should be used. Applicant has corrected this informality by the amendments above.

### **Claim Rejections, § 112**

#### **Examiner's Page 2, Paragraphs 2 and 3**

##### **Examiner's Organizational Structure Retained**

Applicant respectfully submits that it has corrected any § 112 deficiencies by the amendments to the Claims, above.

Re: Claims 13 & 15. The Examiner cites a lack of antecedent basis for the term "said recess-seat meeting area" in line 2 from the bottom of Claim 13 and in line 1 of Claim 15. Applicant amends Claim 13, at the first recitation of the term "seat meeting area" (line 7 of the Claim) to refer to a "recess-seat meeting area." Applicant respectfully suggests that this correction provides the proper antecedent basis for the locations cited by the Examiner.

Re: Claim 13. The Examiner cites a lack of antecedent basis for "said gasket" in line 2. Applicant amends the preamble of Claim 13 to refer to a "gasket interchangeable with gaskets of standard mechanical joints." Applicant submits that this amendment provides the necessary antecedent basis.

**Claim Rejections, § 102**  
Examiner's Page 2, Paragraphs 4 and 5

**I AMENDMENTS OBVIATE REJECTIONS**

Applicant respectfully submits that the Anticipation rejections levied by the Examiner are now moot in light of the amendments set forth above. Namely, each of the Independent Claims (Claim 2, Claim 3, Claim 13, and Claim 16) now contains the additional limitations set forth below, none of which are present in Percebois:

- 1) **CLAIM 2:** Applicant added two limitations: (1) that the gland has a radially inner lip, and (2) that the lip is at least partially within the bell. In Percebois, no portion of the gland ("counterflange," No. 11, in Percebois) either has a radically inner lip or intrudes within the bell. Accordingly, the amended Claim 2 overcomes the Section 102(b) rejection, regardless of whether 2 or 11 is the bell. If, as Applicant suggests, reference No. 2 is the bell, and reference No. 11 is the gland, at least 2 distinctions exist: (1) the gasket is not within the second pipe portion, and (2) no portion of the gland is within the second pipe portion. On the other hand, if, as the Examiner suggests, reference No. 2 is read as the gland, and reference No. 11 is read as the bell, Percebois is still distinguishable, on the basis that (a) the "gland" does not have a radially interior lip, and (b) the "gland" -- and particularly a lip of the gland - does not intrude within the bell at any point.
- 2) **Claim 3:** as amended, Claim 3 now incorporates additional clarity with respect to the separation of extractive forces, and the **distribution of portions** of those forces to different locations. Applicant enhances this clarity with the language "which first portion and second portion are each have a magnitude less than a magnitude of the extractive force." It is evident from the Examiner's response at page 7 of the most recent Office Action, in which the Examiner indicated that "portions of the extractive forces are inherently distributed by way of intervening elements," that Applicant's intent was misunderstood. Based on this language, the Applicant believes the Examiner construed Applicant's claim language as referring to transfer of the force as a whole through the bolts and to the bell. The intended limitation of the claim by Applicant, however, is not that a single magnitude of force is

"transferred", but that the magnitude of separative force is **divided** into diverging vectors, each of which has a magnitude less than the separative force. In Applicant's claims, the extractive force is divided, with one vector directed axially against the gland, and another, separate vector, directed radially (at an angle) into the bell. The dividing of forces is present in the claim as originally filed, which made separate reference to "a first portion" and "a second portion" of the forces. Applicant's amended language clarifies this dividing and separately directing of forces.

- 3) **Claim 13:** Applicant amended the preamble of claim 13 to specify that the gasket is adapted to a standardized mechanical pipe joint. Percebois is wholly inapplicable to standardized mechanical pipe joint, as it requires specialty configurations all bell, gland, and gasket, and would not be seen as interchangeable by a person of ordinary skill in the art.
- 4) **Claim 16:** Claim 16 now includes two additional limitations, neither of which are present in Percebois, that (1) the joint at issue is a standard mechanical joint, and (2) the gland disposes partially within the bell end.

Because each of the independent claims includes limitations and/or elements not found or suggested in Percebois an anticipation rejection is inappropriate. MPEP§2131 these amendments therefore place the application in condition for allowance and are proper after final.

## **II. REQUEST FOR RECONSIDERATION OF EXAMINER'S PRIOR REJECTION**

*If the Examiner agrees that the Amendments set forth above overcome all rejections, this section need not be reviewed.*

### **A. Percebois is Not Relevant Art to Pivoting Locking Segments**

The Examiner suggested the cited prior art must permit rotation, because of the curved profile of the bell-meeting face. Applicant respectfully submits that this is an incorrect assessment. First, the curved profile of the segment in the cited prior art is actually for the purpose of allowing the teeth of the segment to remain in flat engagement with spigot in the event that earth movement forces the spigot out of axial alignment with the bell. Further, analysis of Percebois indicates that the segment shown does not rotate:

- Teeth 18 stay flat until compression of the gasket is initiated. This is evident from the fact that the dot-dash lines shown at 21A meet part 11 as point 16 does, countering any potential rotation. Also, Percebois teaches that element 22 is necessary to draw the locking segment into contact with the counter flange (Percebois 3:50-58), suggesting that teeth 18 remain flat until compressive contact exists between element 11 and element 15.
- With teeth 18 flat, the point of downward pressure between 11 and 15 is approximately center/top of element 15, which is to the left of the rightmost point of teeth 18, and to the right of the leftmost tooth, meaning that rotation cannot occur.

**B. If Percebois' Segment Rotated, it Would Be Outside of the Claims, Because it Would Not Lock**

The Examiner suggests clockwise rotation. Clockwise rotation would cause the contact point between the segment and the spigot to rotate toward a flat point of engagement (the sloped right-hand side of the right-most tooth in Figure 1). In other words, if the segment rotates as the Examiner suggests, it cannot be an effective locking device. At the very least, it is improper to conclude that the segment locks in all normal circumstances. Locking is therefore not inherent.

**C. Possibility of Rotation in Percebois is Insufficient**

The Examiner deduces rotation of segment 15 in Percebois from the appearance of Figure 1. Manifestly, however, Percebois does not expressly recite, suggest, or call out any rotation whatsoever; even the Examiner's own language notes only that Percebois "is capable of pivoting" (Final Office Action, Page 6, line 5). Where the presence of a limitation or element is not expressly stated, the burden is on the Examiner to demonstrate that the limitation or element is inherent in the reference.

- a. Where an element or limitation is not expressly stated in the cited reference, the Examiner must apply the standards for inherent disclosure. Corning Glass Works v. Sumitomo Electric U.S.A., Inc., 868 F.2d 1251, 1255 (Fed. Cir. 1989) ("Anticipation requires that every limitation of the claim in issue be disclosed, either expressly or under principles of inherency, in a single prior art reference. Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026, 79 L. Ed. 2d 687, 104 S. Ct. 1284 (1984).").

- b. Inherent disclosure anticipates only if the result MUST obtain, not if it CAN obtain. Trintec Industries, Inc. v. TOP-U.S.A. Corp., 295 F.3d 1292 (Fed. Cir. 2002) (“A single prior art reference anticipates a patent claim if it expressly or inherently describes each and every limitation set forth in the patent claim. Inherent anticipation requires that the missing descriptive material is “necessarily present,” not merely probably or possibly present, in the prior art.”) (internal citations omitted)). Even if there is a possibility that both (a) rotating, and (b) locking by rotation, occur in the Percebois art, the mere possibility is not enough under U.S. law.
- c. To the extent that the Examiner bases this conclusion on the Examiner’s personal knowledge, the Applicant hereby calls for an affidavit of the Examiner reciting the facts within the personal knowledge of the Examiner that support the finding of inherency. This call is made under 37 C.F.R. 1.104(d)(2).

**D. Examiner’s Invocation of “Same Purpose” for Elements is Insufficient**

The Examiner continues to reject Applicant’s arguments that the Percebois gland and bell are arranged differently from the recitation in the Applicant’s claims. The Examiner states, in more than one location, that “the elements of Percebois have not been misread and are acceptable interpretations as they serve the same functions as the elements set forth in the claim recitations.”

First, the claims of Applicant recite specific structure, and that structure is not found in Percebois. According to MPEP 2131, anticipation is not present unless the elements in the prior art are “arranged as required by the claim.” The elements of Percebois are not arranged as set forth in the Applicant’s claims. As a most obvious example, the gasket is not within the bell in Percebois; rather, it is within the gland. Far from a meaningless technicality, the presence of the gasket within the bell is significant in the industry. If the gasket is outside of the bell, the joint is not a standard mechanical joint, and therefore is not of the same interchanging and retrofit value as a gasket that fits within the bell.

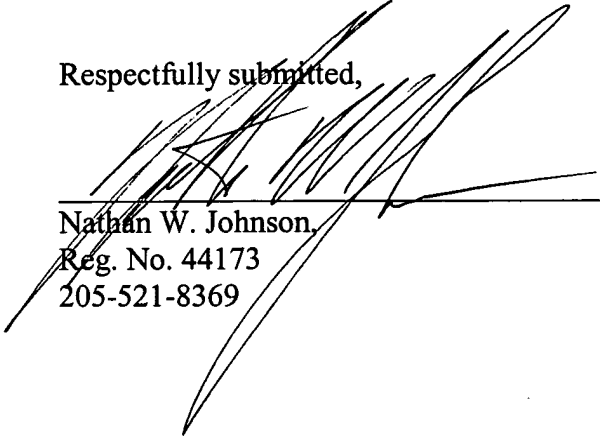
Second, To the extent that the Examiner bases this conclusion on the Examiner’s personal knowledge, the Applicant hereby calls for an affidavit of the Examiner reciting the facts within the personal knowledge of the Examiner that support the finding of inherency. This call is made under 37 C.F.R. 1.104(d)(2).

**Fees**

Applicant has attached hereto a check in the amount of \$400.00 for the fees for an extension fee of two months.

Applicant has diligently sought to comply with all requirements and to correct all informalities and objections. The Application is believed to be in condition for allowance, and early approval is respectfully requested.

Respectfully submitted,



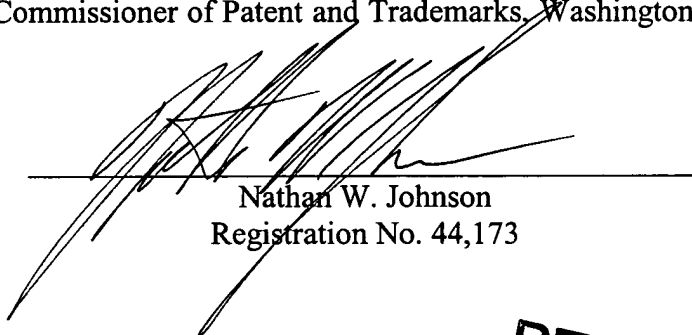
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**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that the enclosed cover letter and Response to Office Action, regarding application Ser. No. 09/590,586, with the appropriate fee are being deposited with the "Express Mail" service of the United States Postal Service in an envelope marked EL918994236US addressed to BOX AF, Commissioner of Patents and Trademarks, Washington, D.C. 20231 on September 30, 2002.

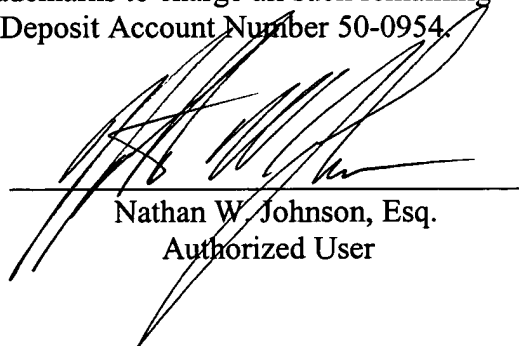


Nathan W. Johnson  
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Date: September 30, 2002

**AUTHORIZATION TO CHARGE  
DEPOSIT ACCOUNT**

If, after processing the enclosed checks, any charges, fees, or sums due remain unpaid in connection with this correspondence, I hereby authorize the Commissioner of Patents and Trademarks to charge all such remaining fees, charges, and other sums due to Deposit Account Number 50-0954.



Nathan W. Johnson, Esq.  
Authorized User

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**Exhibit A**  
Claims in Marked Up Form

2. (Twice Amended) A pipe joint comprising a male first pipe portion, a female second pipe portion, a compression gland having a lip located at an inner diameter of the gland disposed at least partially within the second pipe portion, and a restraining gasket- within in the second pipe portion and between the first pipe portion and the second pipe portion, said gasket further comprising:
- a) a compressible body having a spigot-facing surface, a recess seat-facing surface, and a gland-facing surface; and
  - b) a locking member, said member having a tooth and a back portion at least partially embedded within the compressible body, wherein at least a portion of the tooth is positioned to engage the ~~male~~-first pipe portion, wherein said locking member is adapted to pivot in response to a force tending to separate the first pipe portion from the second pipe portion, and wherein said locking member is -adapted to resist movement between said first pipe portion and said compression gland in the event of such force.
3. (Twice Amended) A pipe joint comprising a male first pipe portion, a female second pipe portion, and a restraining gasket, said gasket further comprising:
- a) a compressible body having a spigot-facing surface, a recess seat-facing surface, and a gland-facing surface; and
  - b) a locking member, said member having a tooth and a back portion at least partially embedded within the compressible body, wherein at least a portion of the tooth is positioned to engage the ~~male~~-first pipe portion, wherein said locking member is adapted to adopt a secured relationship with the first pipe portion upon compression of a gland against said gland-facing surface and wherein further said locking member is- adapted to non-compressibly resist movement of said first pipe portion relative to said gland by transferring a first portion of an extractive force to said gland and a second portion of such force to the second pipe portion, which first portion and second portion each have a magnitude less than a magnitude of the extractive force.

13. (Twice Amended) A gasket interchangeable with gaskets of standard mechanical pipe joints, for securing the ends of intersected assembled pipe portions, said gasket comprising a compressible body adapted to encircle a spigot end of a first pipe length and adapted to fit within a bell end of a second pipe length; said gasket having a spigot-facing surface, a gland-facing surface, and a recess seat surface; said compressible body having embedded therein a locking member, said locking member having a toothed edge, a gland-meeting area, and a recess seat-meeting area; said toothed edge disposed in proximity to said spigot facing surface; said gland-facing area disposed in proximity to said gland-facing surface, and said recess-seat meeting area disposed in proximity to said recess seat surface.
14. (Twice Amended) A pipe joint as in Claim-~~12~~ 13, wherein said gland-~~meeting area~~ facing surface comprises a tooth.
16. (Twice Amended) A method for preventing the disengagement of pipe lengths in a standard mechanical joint comprising:
- a) inserting a spigot end of a first pipe length into a bell end of a second pipe length;
  - b) placing a gasket within the bell end and around the spigot end, said gasket comprising a compressible body and a locking member;
  - c) affixing a compression gland to the bell end and partially within the bell end, in a manner that compresses the gasket to form a fluid seal; wherein said locking member is positioned such that upon a force tending to move the gland relative to the spigot end, said locking member rotates and directs a portion of the force counter to the bell end.